# USH 10 and USH 45 RAT RIVER INTERCHANGE

**WINNEBAGO COUNTY, WISCONSIN**
**PROJECT ID 1517-04-71**

# ENVIRONMENTAL ASSESSMENT

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**SUBMITTED TO:**

**UNITED STATES FISH AND WILDLIFE SERVICE**

**SUBMITTED BY:**

**WISCONSIN DEPARTMENT OF TRANSPORATION**

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| **Date of Approval** | **For Wisconsin Department of Transportation** |
| **Date of Approval** | **For United States Fish and Wildlife Service** |

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# 1 Project Purpose and Need

## 1.1 Purpose

The purpose of this document is to present the alternatives and select the preferred alternative for the design and location of an interchange, in the vicinity of the Rat River Wildlife Area (RRWA), connecting Highways 10 and 45. Highway 45 is being rerouted from its existing alignment between Oshkosh and New London in late 2003. The rerouting of US 45 in the vicinity of the RRWA involves the transferring the US 45 designation to other existing roadways. The new US 45 route will follow existing STH 110 north from US 41, then connect and run jointly with US 10 just north of Winchester, then follow existing County Highway D north to New London. Existing County Highway D will just be jurisdictionally transferred to state ownership and will not be reconstructed. Since this segment of the new US 45 will involve jurisdictional transfers and not new construction, there is no need for an EIS.

As described in the Final Environmental Impact Statement (FEIS) for USH 10 – Fremont to USH 45 (WisDOT, 1998), the purpose of the Highway 10 major project improvement is to provide additional roadway capacity to serve existing and projected traffic volumes, to improve operational efficiency and safety for local and through traffic and to enhance the economic viability of the communities served by the highway. Further, this project will complete Highway 10 between Waupaca and Appleton (Fox River Valley) as a multi-lane divided facility as defined in the Wisconsin Department of Transportation (DOT) Corridors 2020 Plan.

The proposed Highway 10 project is located in Winnebago, Outagamie, and Waupaca Counties in Central Wisconsin (Exhibit 1). The 24-mile (38.6 kilometer) project extends from Highway "U" west of the Village of Fremont, easterly to Highway 45. The proposed action described in the FEIS (WisDOT, 1998) is to expand Highway 10 to a four-lane access controlled divided highway with a 60 foot grassed median. Because of the development along the existing highways, it is proposed for construction on new location.

The improved facility will meet the DOT's design standards for rural freeways. Safety will be improved by restricting access. The four-lane divided highway will provide for uninterrupted travel.

## 1.2 Need for Action

The proposed interchange in the vicinity of the RRWA joining Highways 10 and 45 is needed to provide safe and efficient traffic flow for existing and projected traffic volumes on these corridors. Current design criteria specify that interchanges warrant consideration when design year mainline and side road combined average daily traffic is greater than 12,000 and the side road traffic is greater than 2,000. Design year

2023 daily traffic volume is 15,600 on Highway 10 east of the proposed interchange. Design year 2023 daily traffic volume is 15,100 on Highway 45 south of the proposed interchange. The combined Highways 10/45 design year 2023 daily traffic volume north and west of the proposed interchange is 26,900. All traffic volumes exceed the interchange design criteria.

The purpose of this document is to present the US Fish and Wildlife Service (USFWS) enough information to determine the impact of the proposed action. It is the responsibility of the USFWS to protect land purchased with Federal Aid Funds for fish and wildlife restoration.

### 1.3 Background

As discussed above, the proposed action is to construct an interchange in the vicinity of the RRWA. The following paragraphs present background relating to the Highway 10 corridor selection. This background information is needed to understand the parameters influencing the location of the Highway 10 and 45 interchange.

The action to improve Highway 10 is part of the DOT Corridors 2020 Plan to upgrade Highway 10 to a multi-lane divided highway. Corridors 2020 is a strategic investment plan developed to assess individual highway corridors and place them in the broad perspective of the State's economy and highway network. The plan is designed to enhance Wisconsin's future economic development and to meet the State's mobility needs into the next century. Corridors 2020 includes a backbone network of multi-lane, divided highways connecting all regions and major economic centers in the State, and tying them to the national transportation network of interstate highways. Corridors 2020 is part of Translinks 21 which is Wisconsin's multimodal planning effort.

The concept of a State backbone, high priority, multilane-divided highways built to high design standards to promote economic development, is an effort to address changing conditions in the local, regional and state economies. The goal of Corridors 2020 is to enhance the economic base of the state. Corridors 2020 is a logical follow-up to the completion of the interstate system. In both cases, systems standards were selected to prevail over project-by-project criteria.

Within the designated backbone portion under Wisconsin's Corridors 2020, Highway 10 serves east-west commuter, commercial, and recreational traffic between the Stevens Point area to the west and the Fox River Valley to the east. It provides links to other major highways in the region including: Highway 29 via Highway 51, Highways 54, 49, and 22 at Waupaca, Highways 110 and 49 near Weyauwega, Highway 110 east of Fremont, and Highways 45 and 41 near Appleton.

Traffic along existing Highway 10 in the project study area is forecasted to increase 50 to 70 percent by 2020 resulting in volumes ranging from 10400 to 16600 Average Daily Traffic (ADT). The threshold volume that can be safely accommodated on a 2-

lane rural highway is 8200 ADT. Existing volumes exceed 8200 ADT along all of Highway 10 within the project study area. By 2020, the level of service (LOS) will be unsatisfactory. To address the need requirements outlined the improvement of Highway 10 must safely and efficiently meet the projected traffic needs while minimizing costs and environmental harm.

East Central Wisconsin Regional Planning Commission (ECWRPC) is currently in the final stages of preparing corridor studies for Highway 10 from the Fox Cities to Stevens Point and for Highway 45 from Oshkosh to New London. Their study recommendations support a freeway-to-freeway interchange for Highways 10 and 45. Local governments along the corridors, including Winnebago County and the Town of Winchester, support the recommendations in the ECWRPC report.

The environmental document for the improvement of Highway 10 between Fremont and Highway 45 has been approved and the Record of Decision was signed on May 11, 1998. This document did not adequately discuss the impact of the proposed Highway 10 and 45 interchange on WDNR land purchased with federal funding.

## 2 Alternatives, Including the Proposed Action

Corridor alternatives were developed and presented in the FEIS (WisDOT, 1998) based on information compiled on a composite constraint map of the area. The constraint map contained property lines, homes, farms, buildings, wetlands, historic sites, archaeological sites, cemeteries, existing utilities, potentially contaminated sites, landfills, quarries, public lands, surface waters and drainage features. All alternates begin near County Highway U west of Highway 49 and extend east to relocated Highway 10 at Highway 45.

> Initially, a total of nine new location alternates for a four-lane divided highway were studied (Exhibit 2). In addition, a No Build Alternate, a Reconstruct Existing Alternate and an Improve Existing Alternate with no capacity expansion were studied.

Because highways have wide ranging effects beyond that of providing transportation service, it is essential that they be recognized as part of the total environment. The location and preliminary engineering features for the Highway 10 corridor alternatives were evaluated in the EIS. The location of the proposed interchange within the chosen corridor is discussed in this EA. Both the Highway 10 corridor and the Highway 10 and 45 interchange were developed to meet the project need, to provide acceptable engineering and safety standards, and to avoid or minimize harm to natural and physical resources, cultural resources, and adjacent development to the extent practicable.

### 2.1 Alternatives not considered for Detailed Analysis

Improving the existing roadway was not considered to be compatible with the long-term goals of area-wide planning transportation engineering practice. Therefore, this alternative does not meet the purpose and need of the project and was not carried forward.

Reconstructing the existing roadway also was not compatible with the long-term, area-wide transportation goals and does not satisfy the project capacity and safety needs. Transportation System Management would only provide a short-term fix to localized problems along the existing route.

Locating the interchange for highways 10/45 a significant distance from the proposed location was not considered reasonable due to the proposed routes for both roadways. The rerouting of highway 45 from Oshkosh along existing Highway 110 northerly to Winchester, joint routing with highway 10 northerly from Winchester to existing County Highway D, and rerouting northerly along existing County Highway D to New London has been studied for many years. Traffic studies indicate that this route currently handles a significant portion of US 45 traffic, and it is appropriate to shift the highway 45 designation to this route. Jurisdictional transfer agreements with Winnebago County have been signed to transfer the highway 45 designation to the new route. The proposed highway 10 corridor intersects new highway 45 just north of Winchester. A major shift in the proposed highway 10/45 interchange location would require

a major alignment shift in one of the roadways. Since both roadway locations are established and have been approved, a major shift in the interchange location was not carried forward.

Another alternative involved relocating the highway 10/45 interchange slightly south to miss the RRWA. This alternative moves highway 10 outside of the environmentally approved corridor as established in the FEIS. Also, the overall project involves the construction of an interchange at the new highway 45/110/150 intersection to provide local access. The northern edge of the new highway 45/110/150 interchange ramps and the southern edge of the highway 10/45 interchange ramps already overlap. Auxiliary lanes are included in the design to accommodate the anticipated weaving movements. Any southerly shift of the highway 10/45 interchange location moves the two interchanges closer thereby decreasing the safety and operational efficiency of both interchanges. Therefore, because of the environmental corridor and traffic movement constraints this option was not carried forward.

Light rail was not considered to be a reasonable and viable solution. Bike/pedestrian path development was deemed to not have any impact on the area traffic problems. Mass transit was viewed as working at the local level in the Fox River Valley; however, it was not perceived as having a major impact on the area traffic congestion.

### 2.2 Alternatives Carried Forward for Detailed Analysis

This section presents a brief discussion of the Corridor alternatives presented in the EIS and follows with the identification of the alternatives reviewed for the proposed interchange at Highways 10 and 45. Because of the constraints of the location of the approved corridor, the potential locations of the Highway 10 and 45 interchange are limited.

The location of highway 10 is constrained by the 600-foot wide corridor that was approved in the FEIS. The highway 10 alignment is in the southern portion of the approved corridor. Any shift to the north impacts a greater amount of wetlands in the RRWA. The location of US 45 is constrained since the new route follows existing roadways as described above. Any shift in the new US 45 route will require new construction of roadways and create additional impacts.

All alternates within the Corridor meet at a common point north of Winchester near County Highway W. Two main alternates were considered in the EIS (WisDOT, 1998), east and west of County Highway W. Each of the two has a connector from one to the other thereby creating three possible alternates east and west of County Highway W. Therefore, nine potential route combinations were considered (Exhibit 2).

The chosen Corridor presented in the FEIS is Corridor D-A. Alternates D and A were selected by the DOT as the result of evaluation and consideration of all the reasonable alternates as described in the DEIS. This decision was reached based on a corridor

selection meeting, environmental impacts evaluation, costs evaluation, build feasibility study, testimony from the public hearing and input from federal and state agencies. The Recommended Corridor includes an interchange at the southerly intersection of Highways 10 and future 45.

After completion of the EIS, the portion of Alternate D from Highway 110 to Winchester was upgraded from an expressway to a freeway. Alternate A was also upgraded to a freeway. This removes all access along Highway 10 within the project limits except at interchanges. All side roads will be grade separated, rerouted, or cul-de-sac'd. Residential and business access will be provided via frontage roads. The upgrading of the remaining portions of Highway 10 to freeway status was proposed for the following reasons:

- Prevent safety and operational problems due to conflicts between the high volume / high-speed traffic on Highways 10 and 45 with local traffic.
- Provide overall continuity of system and prevent safety problems inherent with changing between freeway and expressway sections (Highway 10 is a freeway for roughly 9 miles (14.5 kilometers) east of this project and is a freeway for roughly 3 miles (4.8 kilometers) on the western portion of this project from Highway 110 to Highway 49).
- Prevent spot commercial development along corridor that would cause safety and operational problems in the future.
- Restricted access will allow Highway 10 to function adequately as a Corridors 2020 backbone route in the future.
- Local support for a freeway type facility.
- The freeway facility is endorsed by East Central Wisconsin Regional Planning Commission which performed an overall corridor study for Highway 10.

### 2.2.1 Proposed Action

The proposed action will construct an interchange at the intersection of Highways 10 and 45 just south of the Rat River. It involves separation of the Highway 10 four-lane roadway through the interchange area and some left-side exit/merge maneuvers (Exhibit 3). This alternate minimizes the amount of wetland and WDNR land impact since the majority of the interchange construction is south of the wetland area (Exhibit 4). It also maintains adequate design speed for all interchange ramps. Reduction of the median width in the interchange area is not possible because the left-side exit/merge maneuvers occur in the expanded median area.

### 2.2.2 No Action

The No Build or No Action Alternative would construct an at-grade intersection at Highways 10 and 45. However, an interchange joining Highways 10 and 45 is needed to provide safe and efficient traffic flow for existing and projected traffic volumes on these corridors. Design

year 2023 daily traffic volume is 15,600 on Highway 10 east of the proposed interchange. Design year 2023 daily traffic volume is 15,100 on Highway 45 south of the proposed interchange. The combined Highways 10/ 45 design year 2023 daily traffic volume north and west of the proposed interchange is 26,900. All traffic volumes exceed the interchange design criteria. Therefore, the No Build Alternative fails to meet the project purpose and need because the safety and mobility needs of the area would not be met. In addition, this construction would not address statewide, regional, or local transportation objectives.

### 2.2.3 Other Build Option

A second Build Alternative would construct a trumpet style interchange at the intersection of Highways 10 and 45 (Exhibit 4). This alternative maintains a standard median for highway 10 through the interchange and involves all standard right-side exit/merge maneuvers. The highway 10 westbound to highway 45 southbound ramp is served via a low speed loop maneuver, and the highway 45 northbound to highway 10 westbound ramp also contains multiple lower speed curves. The impacts of this interchange option extend much further north than the preferred option due to the alignments for the Highway 45 northbound to Highway 10 westbound and the Highway 10 westbound to Highway 45 southbound ramps. Therefore, the overall wetland impacts and the impacts to the Department of Natural Resources (DNR) land are increased. A preliminary analysis reveals that this alternate requires roughly 28 acres (11.3 hectares) more DNR land than the preferred option. A median width reduction was investigated, but the wetland impacts were not significantly reduced in the northern portion of the interchange. This alternate also has less than desirable geometrics for two of the interchange ramps (Highway 45 northbound to Highway 10 westbound and Highway 10 westbound to Highway 45 southbound). Both of these ramps would be lower speed movements in comparison with the preferred option.

# 3. Affected Environment

## 3.1 Physical Characteristics

The physical characteristics, including land use, socioeconomic and natural resources for the Highway 10 corridor are described in Section III of the FEIS (WisDOT, 1998). This section is provided as Appendix D.

## 3.2 Biological Environment

As with the physical characteristics of the Highway 10 corridor, the biological environment is discussed in Section III of the FEIS (WisDOT, 1998).

The property in the vicinity of the proposed Highway 45/10 interchange consists of agriculture/old-field upland habitats with interspersed residential housing and wetland habitats associated with the Rat River. The interchange study area (Exhibit 5) consists of approximately 141 acres (57 hectares) located within sections 14 and 15 of T20N R15E. This study area encompasses the maximum potential land impact of alternatives carried forward (Alternative C). The land ownership within the study area consists of approximately 81 acres (32.8 hectares) of private property and existing transportation corridor and a maximum of approximately 59 acres (24 hectares) of WDNR land managed as the RRWA. The interchange is the only portion of the facility to impact the RRWA.

### 3.2.1 Private Property and Transportation Corridor

#### 3.2.1.1 Habitat/Vegetation

The 81 acres (32.8 hectares) of private land and transportation corridor within the study area is located in portions of Sections 14 and 15, T20N-R15E. According to the Winnebago County Land Use data, the property consists of approximately 69 acres (28 hectares) of undeveloped/agricultural land and residential property. The remaining 12 acres (4.9 hectares) are mapped as an existing transportation corridor (County Highway W and corresponding right-of-way).

#### 3.2.1.2 Threatened, Endangered and Candidate Species

Threatened, endangered and candidate species are discussed for the entire study area in Section 3.2.2.2.

#### 3.2.1.3 Other Wildlife Species

A discussion of the wildlife noted in the study area is presented in Section 3.2.2.3.

### 3.2.2 Rat River Wildlife Area (RRWA)

The RRWA consists of 4,047 acres (1638 hectares) of property adjacent to the Rat River in Winnebago County, Wisconsin (Consisting of all or part of Sections 1, 2, 7, 8, 9, 10, 11, 14, 15 and 16 of T20N-R15E). County Highway W bisects the wildlife area, northwest of Winchester, Wisconsin. The RRWA is presented in Exhibit 6.

According to the undated *Rat River Wildlife Area Master Plan Concept Element (Appendix A),* the goal for the property is "to manage a state-owned wildlife area to provide wildlife base recreation including hunting, trapping and compatible non-hunting recreation as well as for the production of waterfowl."

#### 3.2.2.1 Habitat/Vegetation

The vegetation communities of the RRWA do not appear to have been mapped for the Master Plan. Based on a limited reconnaissance of the area and review of the Wisconsin Wetland Inventory Maps (WWI), it appears that the majority of the property consists of wetland habitat types. The wetlands are generally characterized as emergent/ wet meadow adjacent the Rat River and a mix of deciduous lowland forest and scrub shrub wetland grading to the upland boundaries. The upland areas within and adjacent to the Wildlife Area are dominated by active agricultural activity and old-field habitats.

The 58-acre (23.5 hectares) portion of the study area within the RRWA is located directly adjacent to County Highway W (Exhibit 5). This property consists of approximately 13 acres (5.3 hectares) of upland old-field and 45 acres (18.2 hectares) of emergent/wet meadow and scrub shrub wetland according to the WWI. The site is dominated by reed canary Grass (Phalaris arundinacea) in the uplands and marginal wetlands, with Cattails (Typha sp.) and Red-Osier Dogwood (Cornus stolonifera) in the wetter low-lying areas.

A wetland delineation was completed for the Highway 10 corridor by the WDNR and WisDOT staff. Water quality certification and a Section 404 Permit were subsequently granted by the WDNR and US Army Corps of Engineers (USACE), respectively (Appendix B). During the delineation, the entire 58-acre (23.5 hectares) study area was mapped as wetland. While this is not technically true, the WisDOT agreed to mitigate for the entire acreage rather than hold up the project detailing the wetland boundary.

#### 3.2.2.2 Other Wildlife Species

A comprehensive wildlife survey was not completed for this EA. However, during several

site visits in April and May of 2001, WisDOT staff along with representatives from the USFWS and WDNR observed the following species throughout the RRWA and adjacent properties; sand hill crane (Grus canadensis), Canada goose (Branta canadensis), mallard (Anas platyrhynchos), lesser scaup (Aythya affinis), northern shoveler (Anas clypeata), blue-winged teal (Anas discolor), northern pintail (Anas acuta), wood cock (Scolopax minor), ring-necked pheasant (Phasianus colchicus), tree swallow (Tachycineta bicolor), sedge wren (Cistothorus platensis), yellow warbler (Dendroica petechia), American goldfinch (Carduelis tristus), American robin (Turdus migratorius), red-winged blackbird (Agelaius phoeniceus), red-tailed hawk (Buteo jamaicensis), and evidence of cottontail rabbit (Sylvilagus floridanus), white-tail deer (Odocoileus virginianus).

#### 3.2.2.3 Threatened, Endangered, and Candidate Species

The USFWS and WDNR were contacted regarding threatened and endangered resources for the Highway 10 corridor prior to the publication of the FEIS (WisDOT, 1998). The agency responses were reported in the EIS.

To update the files on threatened and endangered resources for the proposed interchange, both agencies were contacted on April 13, 2001. The letters are provided in Appendix C.

The WDNR did not mention any state listed plant species known in the area. They did indicate that there are several high quality natural communities in proximity to the project area including: southern hardwood swamp, northern mesic and wet-mesic forest, floodplain forest, southern dry-mesic forest, northern and southern sedge meadow and emergent aquatic communities.

In addition, the WDNR indicated that the state threatened Cerulean warbler and the special concern black tern and least bittern birds, the special concern mammal, Arctic shrew and the special concern broad-winged skipper butterfly are known in the vicinity of the study area.

The USFWS has not responded to the information request regarding federally listed species as of this writing.

## 3.3 Land Use

### 3.3.1 Private Property and Transportation Corridor

As described in Section 3.2, the private property within the study area consists of approximately 69 acres (28 hectares) of undeveloped/agricultural land and residential property and 12 acres (4.9 hectares) of transportation corridor. There are no occupied home-sites within the study area.

### 3.3.2 Rat River Wildlife Area

The Rat River Wildlife Area was established in 1962 and has steadily grown in size. Recreation includes, but is not limited to, small and large game hunting, fishing, trapping, hiking, canoeing, education and bird watching. The current size of the RRWA is approximately 4047 Acres (1637.8 hectares). Long-range goals for the RRWA put the total acreage at approximately 8000 (Appendix A).

## 3.4 Historical and Archeological Resources

### 3.4.1 History

A reconnaissance survey was conducted in 1994-95 for the project area. This effort identified no historical structures within the study area.

### 3.4.2 Archaeology

WisDOT has established a coordination procedure with Wisconsin's eleven Native American tribes and three out-of-state tribes that have had a presence in Wisconsin. Tribes are notified of every WisDOT transportation project. Tribes notify WisDOT of their interest in the project and these are the tribes consulted *if* an archaeological site is located in the project area. No further consultation is undertaken if no sites are encountered in the project area.

Coordination for the USH 10 project was undertaken with the Menominee, Forest County Potawatomi, Ho-Chunk, and Oneida tribal representatives during the EIS process. Menominee took the lead for Native Americans for this project since there was a potential of impact (discussed below).

In 1993 and 1994, identification archeological surveys were conducted on within the proposed USH 10 corridor. This effort was supplemented in 2001 to accommodate design changes within the USH 10/45 study area. The methodology of the survey was designed to identify archaeological sites located within a study corridor of 300 feet on either side of the proposed centerline. In areas where the study corridor crossed overland, the width of the corridor was 600 total feet.

Three archaeological sites were identified during the two archeological surveys. Two of the sites, the Selle site and the River Road site are located within the interchange area. These sites have been studied extensively. Design engineers were unable to design to avoid both sites. During consultation between SHPO, Bureau of Environment, archaeologists, design engineers and the Menominee Indian Tribe of Wisconsin, it was decided that the interchange would be constructed to impact the Selle site rather than the River Road site. It is felt that there is a high probability of encountering burials at the River Road site. Because the Selle property is located within the project footprint, it was the subject of a data recovery effort.

The archaeological site identified within the study area in 2001 is prehistoric and is located on the north side of the proposed interchange. This property was previously privately held and has been purchased by WisDOT. Evaluation studies are on-going and will be conducted to determine the sites' eligibility for inclusion on the National Register of Historic Places. Should the site(s) be determined eligible for the NRHP and cannot be avoided, consultation will be initiated with the SHPO, the Native Americans, and consulting parties to mitigate the project effect upon the historic property(ies).

## 3.5 Local Socio-Economic Conditions

The local socioeconomic conditions for the Highway 10 corridor are described in Section III of the FEIS (WisDOT, 1998). This section has been attached as Appendix D.

# 4. Environmental Consequences

## 4.1 Alternative A (Proposed Action)

The proposed action will construct an interchange at the intersection of Highways 10 and 45 just south of the Rat River (Exhibit 3). This interchange involves separation of the Highway 10 four-lane roadway through the interchange area and some left-side exit/merge maneuvers. This alternative will result in 121 acres (49 hectares) of direct impact. Of this, approximately 109 acres (44.1 hectares) will be converted from current setting to a transportation facility. The remaining 12 are already considered transportation related.

### 4.1.1 Wildlife and Habitat Impacts

The habitat impacts were calculated using the WWI and the Winnebago County Land Use Data for the study area. The approximate impact numbers are presented in Table 1 and discussed below.

As a result of this action, approximately 77 acres (31.2 hectares) of privately owned land will be purchased by WisDOT and converted from its current land use to a transportation facility. The 77 acres (31.2 hectares) impacted consist of four acres (1.6 hectares) of residential development and 73 acres (29.5 hectares) of undeveloped/agriculture land.

Additionally, 32 acres (13 hectares) of the WDNR held RRWA would be impacted by the proposed action. Of the 32 acres (13 hectares) approximately 19 acres (7.7 hectares) of mixed emergent and scrub/shrub wetland will be impacted. The remaining 13 acres (5.3 hectares) consists of upland dominated by *P. arundinacea*.

Wildlife impacts in the vicinity of the proposed action will be realized as a result of habitat loss. Mitigation properties are being offered by WisDOT to help off-set this impact (Section 4.1.2). Paul Samyrdyke, acting Property Manager for the RRWA indicated that “The parcel being taken has some upland, provides a buffer from the highway to the remainder of the wildlife area, and has some road access. While the two parcels acquired (mitigation properties) don’t provide these attributes, they are of greater size, have good wetland cover and good potential for management and expand on contiguous tracts of existing wildlife area (Samyrdyke. 2001).”

**Table 1**
**Habitat Impacts – Alternative A (Proposed Action)**

| | Private Property | WisDOT[1] | WDNR | Total |
|---|---|---|---|---|
| Residential | 4 | | | |
| Undeveloped/ Agriculture | 73 | | | |
| Transportation | | 12 | | |
| Upland/Old Field | | | 13 | |
| Emergent Wetland | | | 12 | |
| Scrub/Shrub Wetland | | | 7 | |
| Total | 77 | 12 | 32 | 121 |

[1] *Existing Highway W and associated corridor.*

While this 32-acre parcel (13 hectares) does provide upland habitat that is generally limited within the RRWA, 200 acres (81 hectares) of upland grass and 250 of wooded upland in the 4200 acre site) this area has limited wildlife habitat value because of its monotypical vegetative cover (*P. arundinacea*). Access to the remaining portion of the RRWA adjacent to the proposed facility will also be limited, as this corridor will be updated to freeway status. This means that there will be no access points from the new Highway 10 and corresponding interchange in to the RRWA. Highway W will remain as a frontage road and access to the RRWA to the south and the Rat River itself will still be available. Access to the Rat River will likely be safer from Highway W as result of the reduced traffic.

To further compensate for the impacts to the RRWA, WisDOT has purchased approximately 55 acres (22.3 hectares) adjacent to the RRWA. These properties are described below.

### 4.1.2 Mitigation Properties

The Wisconsin Department of Transportation has purchased a total of 55 acres (22.3 hectares) of property adjacent to the RRWA for the purposes of off-setting the removal of 32 acres (13 hectares) of existing RRWA land. This property does not include wetland mitigation for the project. Wetland mitigation is discussed in the correspondence provided in Appendix B.

The 55 acres (22.3 hectares) is comprised of two parcels. Parcel 1 is 20 acres (8 hectares) and is located in the NE 1/2 of the SW ¼ of the NW ¼ of Section 10 T20N R15E. As shown in Exhibit 7, this property is bounded to the south and the northeast by the RRWA. The remaining surrounding property is privately held.

Parcel 2 is 35 acres (14.2 hectares) and is located in the NE ¼ of the SW ¼ of Section 8 T20N R15E. As shown in Exhibit 8, this property is bounded to the north by the RRWA. The remaining surrounding property is privately held.

#### 4.1.2.1 Habitat/Vegetation

The habitat of both mitigation properties is similar to the surrounding landscape including the RRWA.

Parcel 1 consists of approximately 19 acres (7.7 hectares) of mixed emergent wet meadow and scrub/shrub wetland and approximately one acre (0.4 hectares) of upland according to the WWI (Exhibit 7). The upland area and the majority of the 19 acres (7.7 hectares) noted as wetland appear to have been used for agriculture in the past and are now dominated by reed canary grass (*Phalaris arundinacea*). Within the old field there are several small pockets of cat-tail (*Typha sp.*). In addition, there are some remaining woody species located along the south and west property boundary. This area has also been historically disturbed and is dominated by bur oak (*Quercus macrocarpa*) interspersed with green ash (*Fraxinus pennsylvanica*), willow (S*alix sp*.) and red-osier dogwood (*Cornus stolonifera*).

Parcel 2 is entirely emergent/wet meadow throughout its 35 acres (14.2 hectares) according to the WWI (Exhibit 8). This property has been disturbed in the past by the cutting of "marsh hay" (assumed to be Carex stricta and/or Phalaris arundinacea). The property is dominated by reed canary grass (*Phalaris arundinacea*), cattail (*Typha sp.*), uptight sedge (*Carex stricta*) and bulrush (*Scirpus sp*.)

### 4.1.3 Listed Species

As discussed previously, this action will impact approximately 121 acres of land comprised of upland, wetland, residential and transportation. The WDNR has indicated (Sections 3.2.2.2 and 3.2.2.4) that there is one state threatened and two state special concern birds, one special concern mammal and one special concern butterfly known in the area. In addition, several high quality natural communities are known in the area.

Based on the information provided by the WDNR, it appears that this action will not impact significant quantities of habitat to have an effect on the listed species. In addition, the impact area does not contain any of the high quality natural communities mentioned.

The USFWS has not responded to WisDOT's request for information regarding federally listed species as of this writing.

### 4.1.4 Historical and Archeological Resources

In the vicinity of the Rat River interchange area, no historic buildings or structures are located within the Area of Potential Effects. One archeological property, the Selle site, was the subject of a data recovery effort. This effort was conducted with consultation with native American tribe and the State Historical Society of Wisconsin.

Archaeologists are currently undertaking additional identification studies. one additional archeological site has been located. It is currently being studied. If it is considered a National Register Site, consultation and mitigation in compliance with Section 106 will be undertaken.

No direct impact will occur on the mitigation properties purchased by WisDOT. These properties are to be added to the RRWA. Therefore, No cultural resource surveys were completed.

### 4.1.5 Secondary/Cumulative Impacts

Transportation is one of the several factors that affect the long-term economic growth of an area. By reducing the travel costs and improving the accessibility to land, a new transportation facility may open up new opportunities for residential and business development. This changed growth pattern and the redistribution of economic activity may alter the type, pattern, and timing of local plans and growth. It may also alter the vehicular use of the existing transportation system.

There is a perceived attractiveness and high quality of life in small communities and rural areas. Reasoning is given that there is affordability in the rural areas. Also, the "comfort factor" is given as a reason for the outward migration of residences. The comfort factor is defined as areas that are within two miles (3.2 kilometers) of a good highway and are sixteen minutes or less from the general area of employment. An improved highway system may cause growth to occur at a faster pace, particularly with residential development. Other factors that influence secondary development are: an area's economic vitality, available land, land costs, housing supply, sewer systems, and land constraints such as land use plans and zoning.

The *Proposed Action* is to construct a free flow interchange at the intersection of Highways 10 and 45. As shown in Exhibit 3, this action does impact some wetlands but provides considerable access control in this environmentally sensitive area. In constructing an access controlled interchange, development adjacent to and along the Rat River Wildlife Management Area will be restricted to the existing roadway system of North Loop Road and Highway W to the south and west away from the freeway. Whereas existing farms will be impacted, the controlled access interchange will help prevent future development and loss of agricultural lands. The Selle Archeological Site (47 Wn 638) within the WisDOT right of way will not be accessible. No construction or borrow activities will be allowed in this area.

As a result of new roadway construction there will also be an addition of de-icing salts to the local environment. This activity, which is applied during snowfall events, can affect water quality by increasing the chloride levels during runoff and snowmelt periods.

Impacts are associated with the migration of salt away from the roadway surface. This migration takes place most commonly by two methods: runoff periods in which salt enters drainage ditches and travels toward receiving waterways; salt spray from moving traffic mists down on adjacent vegetation and soil. The Department of Transportation has a statewide salt monitoring program that began in 1970. Results indicate that occasional high levels of chlorides occur in drainage ditches and waterways because of rapid snowmelt. No long-term build up of chlorides has been observed in the monitored waterways.

Approximately 32 acres of federally funded WDNR land will be transferred from the RRWA to WisDOT. This property will be converted from wildlife habitat to facilitate the construction of an interchange. While this is a direct loss of federally funded land, WisDOT is providing 55 acres of compensatory property which is contiguous to the wildlife area.

### 4.1.6 Environmental Justice

On February 11, 1994, President Clinton issued Executive Order on Environmental Justice 12898. This Executive Order requires all federal agencies to address the impact of their programs with respect to environmental justice. The Executive Order states that, to the extent practicable and permitted by law, neither minority nor low-income populations may receive disproportionately high or adverse impacts as a result of a proposed project. It also requires that representatives of any low-income or minority populations that could be affected by the project in the community be given the opportunity to be included in the impact assessment and public involvement process.

The public involvement process was inclusive of all residents and population groups in the study area and did not exclude any persons because of income, race, color, religion, national origin, sex, age or handicap. All public meetings were announced by block advertisements in local newspapers, by posters hung in area businesses, and by a letter of invitation to persons on our project mailing list. Public meetings were held in handicapped accessible buildings and opportunities to request an interpreter/signer were given. The public meetings were held in an open format that allowed one-to-one interaction with property owners and interested parties. Comment sheets were available for written comments. No one volunteered concerns based on their income or race as part of the public involvement process.

WisDOT attempted to collect and analyze information on the race, color, national origin, and income level of persons located within the project area by checking 1990 census data and with the County Human Services. The search yielded no known minorities or low-income communities within the recommended corridor.

In summary, this project will not have disproportionately high or adverse impacts on either minority or low-income populations. This document is therefore in compliance with U.S. DOT and FHWA policies to determine whether a proposed project will have induced socioeconomic impacts or any other adverse impacts on minority or low-income populations; and it meets the requirements of Executive Order on Environmental Justice 12898 - "Federal Actions to Address Environmental Justice in Minority and Low-Income Populations".

The proposed free-flow interchange does not directly disrupt or displace any low-income or minority populations.

## 4.2 Alternative B (No Action)

A *No Action Alternative* would construct an at-grade intersection at Highways 10 and 45. This alternative does not address the traffic volumes, safety, or overall transportation needs of the area. After exploring the no action alternative to this point, it was felt that it does not meet the minimum standard and therefore was not explored further.

## 4.3 Alternative C - Other Build Option

This alternative would construct a trumpet style interchange at the intersection of Highways 10 and 45 (Exhibit 4). This alternative would meet the purpose and need of the proposed action. This alternative would result in approximately 140 acres (56.7 hectares) of impact to the local environment to accommodate essentially the same traffic patterns as the proposed alternative.

### 4.3.1 Wildlife and Habitat Impacts

As with alternative A, the habitat impacts were calculated using the WWI and the Winnebago County Land Use Data for the study area. The approximate impact numbers for Alternative C are presented in Table 2 and discussed below.

As a result of this action, approximately 69 acres (29 hectares) of privately owned land will be purchased by WisDOT and converted from its current land use to a transportation facility. The 69 acres (29 hectares) impacted consist of four acres (1.6 hectares) of residential development and 65 acres (26.3 hectares) of undeveloped agriculture. The 69-acre (29 hectares) total impact to private property is 8 acres (3.2 hectares) less impact than Alternative A.

Alternative C will impact approximately 59 acres (23.9 hectares) of the WDNR held RRWA. Of the 59 acres, 45 acres (18.2 hectares) are mixed emergent and scrub/shrub wetland. The remaining 14 acres (5.7 hectares) are designated as upland/old field.

The general impacts to access and habitat within the RRWA are similar to those described in Section 4.1.1 (Alternative A). However, Alternative C will impact an additional 27 acres (11 hectares) of WDNR land including an additional 26 acres (10.5 hectares) of wetland habitat.

**Table 2**
**Habitat Impacts – Alternative C**

| | Private Property | WisDOT[1] | WDNR | Total |
|---|---|---|---|---|
| Residential | 4 | | | |
| Undeveloped/ Agriculture | 65 | | | |
| Transportation | | 12 | | |
| Upland/Old Field | | | 14 | |
| Emergent Wetland | | | 14 | |
| Scrub/Shrub Wetland | | | 31 | |
| Total | 69 | 12 | 59 | 140 |

[1] Existing Highway W and associated corridor.

### 4.3.2 Listed Species

Listed species are discussed in Section 4.1.3.

### 4.3.3 Historical and Archeological Resources

Historical and archeological resources are discussed in Section 4.1.4

### 4.3.4 Secondary/Cumulative Impacts

This alternative would construct a trumpet style interchange at the intersection of Highways 10 and 45. As shown in Exhibit 4, this action actually impacts more wetlands than the proposed action. Access control for this interchange would be restricted and would limit future development as in the proposed action. The trumpet interchange design falls short of preferred design standards and results in additional, unnecessary impacts to the landscape.

Aside from the direct impacts to the landscape, this alternative would result in the same secondary/cumulative impacts described in Section 4.1.5.

### 4.3.5 Environmental Justice

The trumpet style interchange does not directly disrupt or displace any low-income or minority populations.

## 4.4 Summary of Environmental Consequences by Alternative

The overall environmental impacts (physical, biological, socioeconomic, etc) for the proposed Highway 10 corridor are discussed in the FEIS (WisDOT, 1998). The specific physical impacts as a result of the Highway 10/45 interchange were not discussed. This document has outlined those impacts in the previous sections. They are summarized below in Table 3.

**Table 3**

**Impact Summary**

| Alternative | Cover Type | Private Property | WisDOT | WDNR | Total | Listed Species | Historical Resources | Archeological Resources |
|---|---|---|---|---|---|---|---|---|
| Alternative A | | | | | | | | |
| | Residential | 4 | | | 4 | No Impact Anticipated | No Impact Anticipated | Investigation Ongoing |
| | Undeveloped Agriculture | 73 | | | 73 | No Impact Anticipated | No Impact Anticipated | No Impact Anticipated |
| | Transportation | | 12 | | 12 | No Impact Anticipated | No Impact Anticipated | No Impact Anticipated |
| | Upland/Old Field | | | 13 | 13 | No Impact Anticipated | No Impact Anticipated | No Impact Anticipated |
| | Wetland | | | 19 | 19 | No Impact Anticipated | No Impact Anticipated | No Impact Anticipated |
| Total | | 77 | 12 | 32 | 121 | | | |
| Alternative C | | | | | | | | |
| | Residential | 4 | | | 4 | No Impact Anticipated | No Impact Anticipated | Investigation Ongoing |
| | Undeveloped Agriculture | 65 | | | 65 | No Impact Anticipated | No Impact Anticipated | No Impact Anticipated |
| | Transportation | | 12 | | 12 | No Impact Anticipated | No Impact Anticipated | No Impact Anticipated |
| | Upland/Old Field | | | 14 | 14 | No Impact Anticipated | No Impact Anticipated | No Impact Anticipated |
| | Wetland | | | 45 | 45 | No Impact Anticipated | No Impact Anticipated | No Impact Anticipated |
| Total | | 69 | 12 | 59 | 140 | | | |

## 5. List of Preparers

| Preparers | Title |
|---|---|
| William Bertrand | Project Manager |
| Brad Helmandollar | Environmental Coordinator |
| Mike Helmrick | Environmental Coordinator |
| Jill Michaelson | Project Development |
| Robert Wagner | Systems, Planning and Operations |
| Shirley Stathas | Bureau of Environment |

## 6. Consultation and Coordination With the Public and Others

| Person/Agency Contacted | Comments |
|---|---|
| Ms. Helen Kitchel<br>Wisconsin Department of Natural Resources | Provided information on State threatened and endangered resources. |
| Ms. Jaclyn Lawton<br>Federal Highway Administration | Provided information for environmental and 4(f) issues. |
| Mr. Johnny Gerbitz<br>Federal Highway Administration | Provided information for project and environmental issues. |
| Ms. Janet Smith<br>US Fish &Wildlife Service | Provided information on federally threatened and endangered resources. |
| Mr. Paul Samerdyke<br>Wisconsin Department of Natural Resources | Provided RRWA Management Plan and comments on the compensatory property |

## 7. References Cited

WisDOT. 1998. Final Environmental Impact Statement and 4(f) Evaluation for USH 10 Fremont to USH 45. Project ID 1517-04-00

Samyrdyke, Paul. 2001. Email from Paul Samyrdyke, acting Property Manager for the RRWA to Brad Helmandollar.

# Figures